The University of Alberta
Printing Department
Edmonton, Alberta

THE UNIVERSITY OF ALBERTA

L.S. VYGOTSKY'S THEORY ON LANGUAGE DEVELOPMENT

BY

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

IN

EAST EUROPEAN AND SOVIET STUDIES

DEPARTMENT OF SLAVIC LANGUAGES

EDMONTON, ALBERTA

SPRING, 1975

A B S T R A C T

Lev Semenovich Vygotsky initiated psychological research in the 1920's in the Soviet Union into cognition and language development, based on the dynamic and active concept of man's socio-historical origins. His intellectual approach to man's higher mental functions is a welcomed alternative to the restrictive observations of physiologists, reflexologists, and behaviorists. His emphasis was on the evolutionary nature of language development and on the active nature of man. He maintained that man with the aid of language could introduce artificial stimuli in order to control his behavior and in the production of creative endeavors.

The aim of this thesis is to analyse the views of Vygotsky on language development in a historical perspective and to comment on his contribution and influence on subsequent psychological research.

Interest in this topic stems from the current relevance of Vygotsky's theories of language development due to recent concern for preschool education. Vygotsky's ideas on the characteristics and potential of this age group is a direct result of his formulative work on language development in man. Vygotsky's approach to cognitive studies has recently received increasingly more positive reviews in the West. Due to this supportive reaction, his ideas are being incorporated into and redirecting psychological investigations.

ACKNOWLEDGEMENTS

My thanks at this time go to Dr. Metro Gulutsan for introducing me to L.S. Vygotsky's articles, for supplying me with valuable source material and for providing timely advice. Sincere gratitude must be expressed to Dr. O. Zujewskyj for his guidance, suggestions and close attention in writing this thesis. A very necessary contribution was made by Ann Haddow in preparing the final version. My thanks to all who helped make this project a reality, with special note of appreciation to Richard and Max.

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NOTE ON TRANSLITERATION

Except for the well-known names used in the text, titles of articles and names of publications are transliterated in accordance with the system outlined in A Guide for the Writng of the M.A. and Ph.D. Theses, printed by the Department of Slavic Languages, The University of Alberta, February 28, 1972.

CHAPTER I

INTRODUCTION

In the 1970's, in the field of psychology, child development is a fashionable and much studied theme. Not only scientists, but parents and educators as well are intrigued by human potential. We would all like the answer to the question: How can man be brought to his maximum level of mental development? Parents are understandably concerned about their children; can a child become brighter with instruction or is the child's level of learning predetermined by his genes? Each year there are scores of books written which probe this very question.

Lev Semenovich Vygotsky, the author of Thought and Language, a book familiar to many readers in the West as well as in the Soviet Union, was a prime mover in the realm of child development studies. Despite the fact that his work ended, however prematurely, forty years ago, his research into the causes and effects of man's higher mental faculties remains a milestone in the history of psychological advances. It has proven a basis for some to further investigate cognition, and for others, perhaps because of their criticism, as a stepping stone in the advance of differing views.

When Vygotsky was engrossed in his research, it was a time of uncertainty for the science of psychology in the Soviet Union. Psychology was suffering a crisis of identity much like the country

itself in the 1920's, following the 1917 Revolution. This internal chaotic condition was reflected in the political ideology as well as in the philosophy of the sciences. What in fact was the rightful domain of psychology? What subjects were within its proper bounds? Opinions ranged from those of behaviorists and reflexologists who preached a search into the behavior of any living creature, to Freudian psychoanalysts who held that only man's inner state, his subconscious was the arena for psychological investigation. Vygotsky opposed the passive nature of reflexological studies, and the limited scope of psychoanalysis.

During that time, the explanations of the human psyche were torn between totally physiological causes and the philosophy of the 'spirit'. Lev S. Vygotsky had been aware of such Western theories of the day as: Behaviorism, Gestalt, Wuerzburg School, and the ideas of Jean Piaget on child development.[1] While being familiar with them, he also incorporated criticism of certain facets of their various doctrines into his search for an understanding of cognition. Interest in human consciousness has long intrigued scientists, from Aristotle right up to present day psychologists. And what might be considered a controversy related to cognition, the question of the relation between mind and body i.e. the dependence and structure of the lower general and the higher, mental functions, as well was of fundamental interest to Vygotsky.

Lev S. Vygotsky sought to reorient the model of learning

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[1]The Wuerzburg School existed in Germany in the early 1900's and included scholars such as N. Ach and O. Kulpe (see page 18). Since 1929 Jean Piaget (1896-) has been Professor of Child Psychology and

away from its passive physiologially conditioned reflex base by undertaking a major study of cognition and the higher mental functions of man. With this study as a foundation, he delved into the role of learning in human development (educational and child psychology), and the interrelation between versus the independence of thought and speech (psycholinguistics). His theory of language development, i.e. the dynamic and social concept of word meaning, was a noted advance in the field of Soviet psychology.

A particularly salient feature of his theory of cognitive development and of most Vygotskian theories is that human progress is the active assimilation of social experiences i.e. the internalization of the social by the individual. Because of this basically social interpretation, he has been credited with a socio-historical study of man's intellectual development in tune with the ideological demands of Marxism. But despite the current pro-Marxist bond , his ideas have not always been found acceptable to the Soviet censors. As a matter of fact, an article byV.Rudnevy in the 1930's interpreted Vygotsky's monograph, Thought and Language to be actually anti-Marxist in nature. [1] The question of criticism and reviews will be covered in more detail in a later chapter.

Since the purpose of this thesis is to analyse the views of L.S. Vygotsky particularly on language development as well as to

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History of Scientific Thought at the University of Geneva.

[1] A.V. Petrovskii, Istoriia sovetskoi psikhologii, (Moscow: Prosveschenie 1967), p.102.

mention his contribution to the research on this topic, it will not only be based on the material available in translation in his monograph Thought and Language but also on his original articles and reports. Vygotsky's psychological theories have had a pronounced influence on Soviet psychology and they have been given increased attention by western psychologists. The area of concentration of this thesis, i.e. language development, is of interest to those in the fields of linguistics, child psychology and cognitive development. Henceforth, his views will be discussed in relation to other Soviet and Western theories which also deal with the theme of language development.

This thesis will also examine some criticism of Vygotsky and attempt to clarify his position in the science of the 1930's. The scope of this paper does not permit elaboration on the general topic of language development. However, those interested in a broad discussion of the theme may refer to Joseph Church's Language, Thought and Instruction. For more information on the history of Soviet psychology in particular there are such surveys as: A.V. Petrovskii's Istoriia sovetskoi psikhologii (1970), M.G. Iaroshevsky's Psikhologiia v XX stoletii (1971). Sources of general material on the history of Soviet psychology are available in English in Soviet Psychology translated by Ralph Winn, in addition a Handbook of Contemporary Soviet Psychology edited by S. Maltzman and Recent Soviet Psychology edited by N. O'Connor.

A BIOGRAPHICAL SKETCH

In order to give a more comprehensive understanding of L.S. Vygotsky's works, a look into his interests and career besides his actual theses on language development will be appropriate. Along with of his achievements in particular in the study of cognition, it is amazing how diversified this scientist's concerns and experiences actually were.

Lev Semenovich Vygotsky (November 5,1896 - June 11, 1934) was born to a servant family in the town of Orsha, a Belorussian town on the Dnieper River, southwest of Smolensk. [1] By means of education he was able to not only advance to the position of university Professor, but also become known internationally in the field of psychology. Upon completing gymnasium with honors, he proceeded to enter both Moscow State University's law school and Shaniavsky University's department of philosophyand history. Being the genius that he was, he graduated almost simultaneously from each university, receiving the respective higher degree from each in 1917.[2] However, it was not until after studying philosophy,history and literature, that his intense interest in psychology became evident. It was more or less a hobby, as his research

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[1] I.N. Semenov, "L.S. Vygotsky", Bol'shaia sovetskaia entsiklopediia, (Moscow: Izd. 'Sov. Entsi.', 1971), vol. 5, p.521.

[2] D.I. Slobin, "Noted figures in the history of Soviet Psychology: pictures and brief biographies", Soviet Psychology and Psychiatry, (Spring, 1966), p.111

in psychology was done independent of formal supervision.

After the 1917 revolution, Vygotsky was employed in the town of Gomel'. Perhaps because he did himself come from a small Belorussian town, he was able to begin work during the reconstruction in that Republic. In any event he became involved there with public education administration. Having been in charge of its public school theatrical section, he associated quite closely with their productions, counselling the selection of their repertoire and overseeing the actual staging of each performance. [1]

During this time, 1915-1922, he wrote a series of articles which later appeared in Psikhologia iskusstva (The Psychology of Art) in 1925.[2] The interest displayed here during his initial scholastic years from university education through to his field work in Gomel's public school administration, provided the roots for his profound quest for the origins of consciousness which materialized much later in his research on child psychology and language development. The connecting thread, the driving force behind Vygotsky's life seems to have been the search for the source of man's creativity.[3] In his probings,

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[1] V.N. Kolbanovskii," O psikhologicheskikh vzgliadakh L.S. Vygotskogo", Voprosy psikhologii, (Moscow,1956) Vol. 5, p.104.

[2] A.N. Leontiev, "Introduction", The Psychology of Art, (Cambridge,Mass.: M.I.T. Press, 1971), p. vi.

[3] Ibid., p.x.

he touched upon the arts as well as the sciences.

As a direct result of his appearance at the second all-union Congress on Psychoneurology in 1924, Vygotsky had been invited to attend the Institute of Psychology at N.K. Krupskaia Academy of Communist Education. There he organized a group of young psychologists into a psychology cabinet where experimental research in education was conducted. The fruit of this committee's labor was published in Pedagogicheskaia psikhologiia (Pedogogical Psychology).[1] This book had been the only general statement of Russian psychologists' experience in the sphere of education, in particular the instruction of the younger generation. One of Vygotsky's most pressing concerns was illuminated here, the importance of education. While advancing the question of the relation between education and human development, he emphatically spoke out on the leading role of instruction in the process of intellectual development.

From the time he completed his dissertation, (Psikhologiia isskustva) in 1925 until he suffered a very serious attack of tuberculosis, Vygotsky maintained a full and demanding schedule. He had taught and lectured in both Leningrad and Moscow, developing a widespread reputation in the field of psychology. Word of his vitality, inspiration and knowledge went beyond his actual presence. Many centers of learning, besides those which he attended, had opened their facilities to him for research as well as extending invitations to lecture.

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[1] V.N. Kolbanovskii," O psikhologicheskikh vzgliadakh L.S. Vygotskogo", Voprosy psikhologii, (Moscow,1956), p. 107.

By the late 1920's, Vygotsky had already begun to work with the physically handicapped children in NARKOMPROS. [1] In addition to teaching and administrative tasks, he somehow found the time to do experimental research in child psychology as well as theoretical studies.

The period in his life following that bout with tuberculosis in 1926 showed a marked difference to that which preceded. What might well be termed a transitional time for Vygotsky, when he was bedridden, was in fact a chance for him to contemplate. Somehow having had the time to reflect, he showed more determination than ever to probe the essence of human consciousness; the development of language in children became his prime focus. His attention had been hitherto as dispersed as his interests had been widespread.

In an article produced during his illness, although not completed, "O smysle krizisa v psikhologii" (On the meaning of the crisis in psychology), which dealt with the methodological problems which faced psychology, he meticulously questioned the doctrines of the popular schools of psychology. One of the internal crises he saw was the tendency of psychologists to turn any discovery into a universal explanatory principle. [2]

> As psychoanalysis had overgrown into metapsychology through biology, so does reflexology through biology grow into an Energetics' world view. The contents of reflexology's course is thus a comprehensive catalogue of the universal laws. And again as with

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[1] NARKOMPROS is the State Academic Council of the Public Commisariat of Education on which Vygotsky had served as member from 1929.

[2] V.N. Kolbanovskii," O psikhologicheskikh vzgliadakh L.S. Vygotskogo", p. 107.

> psychoanalysis, it seemed that everything in the world was a conditioned reflex. Anna Karenina, cleptomania, class struggle, landscape, language and dreams are all also conditioned reflexes. (Quoted from the manuscript) [1]

L.S. Vygotsky spent most of his remaining years engrossed in the field of general and child psychology as he researched with his coworkers: the relation of thought and speech, the analysis of the general questions of a child's intellectual development and the relation between that development and the learning process, education. In this period, with thehelp of a series of experimental studies, Vygotsky had shed some light on the course of the development of word meanings. According to Vygotsky it is the evolution of word meanings which initially characterized the basic stages of mental growth of the child.

Around Vygotsky there had gathered a friendly group of scientists, usually students, who discussed the questions of psychological theory and practice. Among such proteges were A.N. Leontiev, A.R. Luria, and A.V. Zaporozhets who have since Vygotsky's life earned recognition in psychophysiology. While his work may be carried on and advanced, his unique search for the secret to man's creativity will remain unfinished. The appearance, however shortlived, of a scholar so trained in the sciences and so intrigued by the arts could not but advance the cause of Man.

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1 V.N. Kolbanovskii ," O psikholog icheskikh vzgliadakh L.S. Vygotskogo", Voprosy psikhologii, (Moscow, 1956), p.108. Translations from Russian sources in this thesis are the author's.

CHAPTER II

PRECURSORS IN SOVIET PSYCHOLOGY

Vygotsky's predecessors in the pre-revolutionary Soviet Union, then Tsarist Russia, were psychological physiologists; men like I.M. Sechenov, I.P. Pavlov, V.M. Bekhterev whose orientation was basically physiological. Ivan Michaelovich Sechenov (1829-1905) worked in the area somewhere between physiology and psychology. He carried out experimental investigations on the inhibition of reflex movements by the cerebral cortex. Working on the inhibitory function of certain nerve impulses, he believed that behavior was a type of reflex, such as the responses to stimulation which were mediated by a central coordinating apparatus. For this he coined the phrase 'reflex arc'. According to Sechenov, cognition was a result of the fuller elaboration of the functioning of the central components of the reflex arcs.[1] He tried to show a physiological basis for mental processes, while trying to point out that the psyche, instead of being independent of the body, is a function of the brain and central nervous system and is therefore a physiological phenomenon. Sechenov's thesis was that psychic activity can be explained by reflex activity. Thinking according to him was an inhibited reflex. In thinking, there is only the receptive phase of the reflex, movement being absent.

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[1] R.A. Bauer , Some Views on Soviet Psychology,(Washington, D.C.: American Psychological Association, 1962) p.2.

I.P. Pavlov (1899-1936) who attributes Sechenov's Reflexes of the Brain as his theoretical inspiration took his theories and submitted them to experimentation e.g.the stimulus response studies of the salivating dog. Pavlov had defined two basic signal systems, the first being a direct reflex to the environment ie. the salivating dog; the second and most dear to Vygotsky was that of language, as a system of mediating signs which enable man to generalize and to abstract.

V.M. Bekhterev (1857-1927) was another psychological physiologist who based his theory on the study of the formation and modification of reflexes which he termed reflexology. Bekhterev was concerned with conditioning in the study of motor responses. He wanted a psychology based on the tools and concepts of physiology with no resort to the subjective processes.[1]

The behaviorists T. Thorndike and J. Watson also held this objective line. Watson said thinking is nothing more than subvocal talk. After learning to talk by conditioning, thought is nothing more than talking to ourselves.[2] A bodily response is a word substitute. Both reflexology and behaviorism came into fashion as a reaction to Wundt's elementarism.[3] They stress the importance of introspective study of consciousness.

Gestalt psychology developed in Germany at about the same time that Behaviorism did in the United States. The Gestalt

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[1] R.Watson, The Great Psychologists,(New York: Lippincott Co. 1971),p.438.

[2] Ibid, p. 445.

[3] Wilhelm M.Wundt (1832-1920) was a psychologist who sought to identify

psychologists considered the study of the mind as an indivisible whole, not to be divided into componential parts such as the environmental influence and the physiological make-up. 'Gestalt' is both the object and the form characteristics of that object.

Pavel Petrovich Blonskii (1884-1941) was more philosophically oriented. An educator and psychologist, he did however shift to the natural science camp of psychologists as he prepared the reforming of psychology on the basis of objective principle close to that of the behaviorists.[1] He considered psychology to be the science of the behavior of living things.[2] In Soviet books on psychology, Blonskii was criticized for his kinship with reflexology and behaviorism and his lack of dialectical materialism. At that time, 1917-1922, the Soviets were seeking a psychology which would rebuild the new Soviet man along Marxist-Leninist lines, psychology with practical application in industry and education.

The tone of future Soviet psychological investigations was set at the initial Congresses on Psychoneurology (1923, 1924-1929). Soviet psychology showed quite early, its separation from the theoretical philosophical orientation in favor of physiology based on experiments. Konstantin Nikolayevich Kornilov replaced G. Chelpanov (1862-1936) as director of Moscow's Institute of Psychology in 1924. In the twenties, Kornilov developed what he thought the new Soviet state needed, a psychology

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the elements of consciousness and to state the principles by which these elements are combined. In 1879 at Leipzig he founded the first laboratory for experimental psychology.

[1] A. Petrovskii, Istoriia sovetskoi psikhologii, p.34

[2] Ibid., p.34

in line with dialectical materialism, Reactology.[1] Following Marx, Kornilov said that social existence determines consciousness. Mental life cannot be reduced to simple mechanistic motion. Kornilov's interpretation was thought to be too passive for the revolutionary government and thus had a short reign. However, at the second Congress on Psychoneurology it was reactology and Bekhterev's reflexology that were the trends to be reckoned with. It is of note that Vygotsky made his debut at this conference in 1924.

The topic of human consciousness was popular at the time that L.S. Vygotsky worked. He pressed on energetically to further research in the field of the development of cognition. While not in agreement with Sechenov who believed that the objective reflex method should be used in psychology, Vygotsky was of a mind to free the organism from the push-pull determinism of the stimulus response connection through the consideration of the kinds of transformation that organisms impose on their environment.[2] He sought to break from the stimulus response substitution model of conditioning by noting that stimuli took their significance from the linguistic matrix in which they were embedded. Here it is worth mentioning the instrument which man utilized according to Vygotsky to free himself, the second signal system of Pavlov, language. The sign, rechevoi znak, which he specified as a unit of language is

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[1] Kornilov, "Psychology in the Light of Dialectical Materialism" Psychologies of 1930, (Worchester, Mass.: Clark University Press, 1930, pp. 243-278.

[2] J. Bruner, "Introduction" Soviet Psychology (Spring, 1967) Vol. v., No. 3, p.3.

first and foremost artifical, created by man himself to effect communication between individuals, transmit culture between generations and permit the inner, personal process of thought and control of behavior. The sign served that very cognition to which it owed its existence.

Vygotsky introduced the distinction of the lower versus higher mental functions , the former being that which was natural, spontaneous, and unchannelled by culture; the latter being those functions which dealtwith the instruments of human culture and history.[1]

Thus, Vygotsky's name has come to be linked with the development of a new presentation of cognition, that which was inspired by the idea of historicism.[2] L.S. Vygotsky believed that it was the use of instruments which separated man from animal. The primary tool was language which bridged the gap of time. Unlike tools of labor which helped alter the material world, language actually mediated behavior. Man was culturally-historically conditioned. With this understanding the study of language, the instrumental functions of speech signs, rechevoi znak, or as termed by Pavlov, the second signal system, became a major concern in psychology and psychological physiology.

Being aware of the diametrically opposing forces in psychology, physiology and philosophy (physiology which does not explain the complex higher functions of human cognition and philosophy

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[1] J.Bruner , "Introduction" Soviet Psychology Vol.v.,No.3 (Spring,1967)p.4

[2] Iaroshevskii, Psikhologia v XX stoletii ,(Moscow: Izd. Polit. Lit. Mysl', 1971) p. 274.

which defined cognition as a problem of the 'spirit'), Vygotsky had found no studies leading toward the explanation of personality and no explanation of the complex laws governing the specifically human functions of the cortex.

The presentation of the word as a means of changing the sensitive fabric of mental life into a complex intellectual product has long since been in the philosophical linguistic inventory. Behaviorism used the idea of word/thought connection in combination with the fact that a real word is a speech act. J. Watson identifies thinking with soundless speech. The position of Vygotsky differed from behaviorists in that they, the behaviorists, did not identify the thought operation with speech signs, or with cognition. [1] According to Vygotsky, the use of signs does not exist in a vacuum, signs are given meaning by their use in society. What becomes obvious in his research is that the external force of the environment as well as the instruments such as language are Vygotsky's major concerns.

For information on the origin and activity of man's higher mental functions, L.S. Vygotsky turned to the developing child. He pointed out that the social development of the child was a determining factor in the psychological growth of the child and in the formation of his complex psychological mechanism. Having exhibited by his experiments that in the process of contact by the child with the world of adults and in formal instruction, there occurs the acquisition of new habits and the actual transformation of the psychological processes (in the sense of

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[1] M.G. Iaroshevskii, Psikhologia v XX stoletii, p.277

developing new mechanisms which are essentially social in nature), he had given an analysis of the origin of such complex psychological formations as logical memory, active attention, vocal speech etc. for the first time using the genetic (developmental) method in drawing out the complicated problems of human activity.[1] An example was the research on thought and speech operations. He derived each from separate roots but charted a course of development which showed them united in verbal thought to part again. These operations were unique in their growth but consistently interacted.

Speech was of the utmost importance in his theory of development of man's higher intellectual functions. It not only made possible the transfer of culture and information but also 'creates the possibility of intelligent coordination of functions'.[2]

From his work in child development, he applied his theories to the field of clinical psychiatry. He was interested not only in the norm but in deviants from that norm and their causes and possible correction. Vygotsky was involved very deeply in the applied as well as the theoretical sciences, as the ideology of the new state preached practical work for the improvement of the new Soviet man.

A school of thought which existed while Vygotsky worked was pedology. It exerted some influence on him, while in turn being influenced by his own ideas. Child psychology as a spearate discipline was developed at the end of the nineteenth century and at the beginning of the twentieth.

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[1] A.R. Luria, "L.S. Vygotsky: A Biographical Sketch", Psycholinguistics: A Book of Readings, p. 535.

[2] Ibid., p. 535.

Pedology as a special 'science of the child' dealt with child development in the areas of psychology, biology, physiology etc. One tenet of pedologists was their fatalistic definition of human cognition as "independent from matter and as something primary which develops both in its phylogenesis and ontogenesis according to the law which started it on its course; a course determined by heredity or environment." [1]

Such contemporaries of L.S. Vygotsky as P.P. Blonskii and Jean Piaget worked closely with child development. Those within the Soviet Union were profoundly affected by their association with pedology. The Communist Party condemned pedology in 1936. It condemned all those connected with it and their ideas. It also banned scholastic aptitude tests and ordered a review of all literature. Due in part to his association with child development in general and pedology in particular, Vygotsky's words were restricted by the Communist Party along with the studies of other educators and scientists. However, it was not until the 1956 twentieth party Congress, that his articles were resurrected and reinterpreted. He was in fact proclaimed as the first Marxist based psychologist.

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[1]Huebsch, Hans, "Introduction", Soviet Psychology: A symposium, (London: London Vision Press, 1962), p. 6.

[2]See A.V. Petrovskii's Istoriia sovetskoi psikhologii, p. 302 for a discussion on the actions of the Communist Party in 1936 and in 1956 in regard to pedology and L.S. Vygotsky.

CHAPTER III

LANGUAGE DEVELOPMENT: THOUGHT AND SPEECH

The topic with which L.S. Vygotsky was preoccupied was cognition. How is man distinct from animals? By thought, the essense of cognition? Intrigued by the development of an individual's intellectual capacity and by the historical course of man's development L.S. Vygotsky thereby concentrated on the mental development of the child, on the beginnings of cognition and on the learning of language. For this he had to build his own theory of language development.

A question current at the time Vygotsky worked was whether or not thought and speech were two divisible entities; if so, what was their interrelationship. Contrary to the 19th century philosophical idealism, there arose among scientists the notion that the thought process could indeed be studied experimentally. Kuelpe and the German Wuertzburg school believed that thought and speech could actually be called separate entities; that there did in fact exist 'imageless thought', thought without words, the 'representation of meanings in thinking that did not seem to be carried by specific images.[1] Another contribution of the Wuertzburg school was the concept of conscious task (Aufgabe) and the unconscious set (Einstellung) in a person. They demonstrated the unconscious determinants of behavior in man's adaptability to experiments or tests.[2] This concept of unconscious

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[1] D. Taylor, "Thinking", Theories in Contemporary Psychology, (New York: Macmilliam and Company, 1963), p. 475.

[2] R.Watson, The Great Psychologists, pp. 299-300.

versus conscious act appears in Vygotsky's works but under different referents. He often used the terms spontaneous or passive to mean unconsciou and active or deliberate to mean conscious. It came up quite strongly in his discussion of the life or everyday concept formation as opposed to scientific concepts. A later chapter will be devoted to his theories of concept development.

The adaptability of man vis-a-vis his behavior was a source of numerous questions to psychologists. Some scientistse.g. behaviorists, sought to predict and to control man's behavior; while the Russian physiologists I.P. Pavlov and V.M. Bekhterev following the Sechenov tradition sought the material, physiological bases for behavior. But according to Vygotsky, it was man's thinking that directed his behavior. When a child learned language, he then learned to direct and to control his own behavior. Thus, although he strongly defended the division of thought and language, he just as adamently stressed their interdependency.

L.S. Vygotsky had a systematic organization of cognition. It was characterized by the bond and relation between the various mental functions. In order to understand the particularities of any one partial mental process of man, that understanding must come from an analysis of the whole.[1]

Language is a tool with which man works. Vygotsky

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[1] A.N. Leontiev and A.R. Luria, "Psikhologicheskie vozzreniia L.S. Vygotskogo" Izbrannye psikhologicheskie issledovaniia, (Moscow: Izd. Acad. Pedog Nauk., 1956), p. 11.

considered the fact that man employed instruments to distinguish him from the animal world. Language, the so-called second signal system, was of the greatest value to man because it was through this particular tool that culture was transmitted from generation to generation, bearing out the cultural historical development of man. Another important aspect of language was its influence on the intellectual activity of perception. Perception of the world around is largely determined by the individual's mastery of language. "Words function in organizing the world of experience to make it conceptually manageable."[1] As a person's language ability develops, so does his conception of reality transform or mutate. For an infant, there is a pre-intellectual, pre-linguistic stage when the world reflects a physiological character direct responses to the environment and his needs, closely corresponding to the demands and affects on the infant.[2] It is later when the child operates with the fundamental functions of the word, that reality is perceived with more depth. From there, Vygotsky probes the levels of concept formation from the generalization of an object to abstraction of an idea, in his discussion of the mental development of the child's language ability.

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[1] A.N. Leontiev and A.R. Luria, "Psikhologecheskie vozzreniia L.S. Vygotskogo", Izbrannye psikholog i cheskie issledovaniia, (Moscow: Izd. Acad. Pedog. Nauk., 1956), p. 11.

[2] J. Anglin, The Growth of Word Meaning, (Cambridge, Mass: MIT Press, 1970) p.2.

WORD MEANING

In his analysis of thought and speech, L.S. Vygotsky dwelt on that unit which he found common to both, word meaning. Word meaning was a unit of verbal thought .[1]

> Word meaning seems to me an extremely important entity of thought research, because it preserves for us a study of verbal thought in which speech and thinking are represented in their unity. It seems to me that any word meaning is on the one hand speech because to the nature of the word there belongs the fact that it has a known meaning (deprived of meaning - this is simply an empty sound), on the other hand, any meaning represents a generalization. There is no such meaning, behind which the process of generalization is not hidden.. any word meaning arises as a product as well as a process of an idea; consequently, its impossible to say that it is either speech or thought.[2]

According to him, it was a generalized thought, social in content and a reflection of reality. Verbal thought preserves all the qualities of both speech and thought in a real and dynamic entity. It is always a generalization of man's social experience and is constantly changing. Likewise, cognition is by its nature social. Man masters the meanings worked out by society in the process of his language development. While the child's mental activities, viz. his perception of reality develop, word meanings also develop; as does its function, that of serving communication. Vygotsky studies the evolution, function and structure

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[1] L.S.Vygotsky, Thought and Language, p.5

[2] L.S. Vygotsky, Umstvennoe razvitie detei v protsesse obucheniia, (Moscow: Gos. uchebno-pedagog. izd., 1935), pp. 98-99.

of verbal thought, taking into consideration the inseparable unity of the two genetically different mental processes.

In discussing the notion of word meaning or verbal thought it is important to note that a single definition of the topic is quite impossible. There is really little or no consensus on the concept of meaning; no agreement on what the term is intended to indicate nor on what is and what is not implied by the term.[1] To illustrate such a divergence of opinion on the issue of a definition, here are a few such attempts by R. Fowler and N. Brooks:

> Bloch and Trager: the meaning of a linguistic form (Word, part of a word, or combination of words) is the feature common to all the situations in which it is used... to define the meaning of any word for a single speaker, it would be necessary to analyse all situations in which he had heard and used it (impossible).
>
> Harris: the meaning of utterances .. the correlation of utterances with the social situation in which they occur.
>
> Hill: meaning proper is ultimately correspondence between a linguistic item and an item in the nonsymbolic world, or between a linguistic structure of many items and a similar structure in the nonsymbolic world. 'Meaning proper' is a referential, arbitrary relation of a linguistic form with a feature of extra linguistic world.
>
> Fries: 1. Linguistic meaning a. lexical
> b. structural

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[1] J. Anglin, The Growth of Word Meaning, p. 2.

2. Social meaning[1]

De Saussure: a meaning is not a physical thing but a concept.[2]

Word meaning or verbal thought was held by Vygotsky to be that unit which incorporates the level of development of a child's thought and speech at a particular point. It is a generalization of an object made by the child in his initial stages of language development as opposed to the generalization of an idea which marks a later plateau in conceptual thinking. The child's verbal thought bears a direct effect on his current intellectual maturation.[3]

Vygotsky's notion of meaning is that of a reflection of reality. The word, possessor of meaning, is a conditioned stimulus artificially created by man as a method of regulating his behavior. Devoid of meaning a word holds absolutely no significance for Vygotsky's research. That meaning, attached to a word, is developed by society and history and is acquired by a child in stages which mirror his intellectual growth. The child initially connects meaning and sound, a word, to what he had perceived. As his perception improves, and that word is reinforced by society, his understanding is both broadened and made more acute.

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1 R. Fowler, "A Note on Some Uses of the Term 'Meaning' in Descriptive Linguistics", Word Vol. 21 (New York 1965) p.415

2 Nelson Brooks, Language and Language Learning, (New York: Harcourt, Brace and World, Inc. 1964), p.13.

3 J. Fodor, "Some Reflections of L.S. Vygotsky's Thought and Language", Cognition, p.86.

Vygotsky felt that as meaning grew, so did the word's function. Once again on an early level, it served as a pointer, that which can educate by guiding his attention.

> Our initial words signify a pointer to the child, Together with this it seems to me, that we approached the initial function of speech, which has gone on unappreciated by any researchers. The initial function of speech is that words have a significance for the child, not that with their help a relative new connection is made, but rather that the first word is directive! The word as such (a pointer) is the primary function in speech development from which all the rest can lead.[1]

At this point in language development, the control of the child's behavior is a two person operation, between adult and child. However, at a later date, when the child has internalized the speech process, he does it alone. This part of his mental growth is discussed in the next chapter when the topics are egocentric and inner speech.

Barring any abnormal mental deficiencies, the child utilizes a word, generalization of an object or a name, to attract his attention and in the gradual formation of new ideas.[2]

Each age in language development is characterized by the changing relationship which exists between the child's educational work on the one hand, and his particular mental development on the

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[1] L.S.Vygotsky, "Razvitie vysshikh form vnimaniia v detskom vozraste" Izbrannye psikhologicheskiie issledovaniia, p.410

[2] Ibid., p.477.

other.[1] Initially, Vygotsky emphasizes the external influence of speech. During the early stage of speech development, (between 1½ and 3 years roughly) there is really no predetermined program of learning. The child in this age bracket learns according to his own personal program.[2] An example of this is his speech; the child himself grasps observations from his surroundings. His first words seem totally of his own choosing. Vygotsky does however, admit that the speech environment has a very marked influence. If he is deprived of a rich speech environment, his program will be somewhat limited. This early type of learning he terms 'spontaneous' which is directly contrasted to the school age instruction, following a teacher's program. The latter he calls 'reactive'. In addition Vygotsky describes a transitional stage of the preschoolers called 'spontaneous-reactive'. In the report at the all-Russian conference on preschool education reproduced in "Obuchenie i razvitie v doshkolnom vozraste", Vygotsky gives a detailed description of the transitional age. In this article, he outlines what a preschool program of learning can and should do to prepare the child for his next stage, that of school instruction. He points out the peculiarities of this stage in life and how they can best be enhanced. One notion he stresses is the dominant role of memory as opposed to that of perception in a younger child. Also worth noting is the child's tendency to understand some

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1 L.S.Vygotsky, "Obuchenie i razvitie v doshkolnom vozraste" Izbrannye psikhologicheskie issledovaniia p.426

2 Ibid., p. 426.

factual data and to establish generalizations based on those facts. The child must be prepared for school during this time by encouraging the differentiation between subjects such as social and natural. Before he can actually take up the study of separate disciplines, he must be able to tell them apart. In a preschool program, the instructor must give the child some guidelines and goals. Those goals need not be as demanding and restricted as a school course but they must encourage the preschooler toward his potential.

The dawn of language discovery approaches when speech enters the picture and begins to serve the intellect and when thoughts are spoken; when thought becomes verbal and speech rational, then the development of the two heretofore separate processes begins to intersect.

Beyond the instructional directive function, word meanings are drawn into one complex in the course of the development of a word, in the same way the child incorporates different things into groups on the basis of concrete imagery. These groups, the formation of word families, are named usually after unessential attributes.[1] Word meaning, a potential concept, is an integral part of the developing processes and the word maintains its guiding function in the formation of the concepts to which these processes lead.[2]

The result of L.S. Vygotsky's study on thought and language was the thesis that word meanings evolve (as opposed to the association

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[1] Vygotsky, L.S. Thought and Language, p.74

[2] Ibid., p.81. According to Vygotsky, a potential concept is that category

between the word sound and content). Word meanings according to L.S. Vygotsky, are dynamic. They can be related to each stage of the development of thought and speech. He distinguishes the phases a thought goes through before actually being generalized by a word; (the inner semantic aspect and the external phonetic).

Although united in one word, the intellectual processes of thought and speech do actually follow their own laws of development. While a child may have difficulty in learning a new word, it is not because it is difficult to pronounce, but rather because the concept embodied by that word is beyond his comprehension.

Word meanings play a major role in the initial steps of concept formation. It is itself a potential concept of the most elementary type.

> The processes leading to concept formation develop along two main lines. The first is complex formation. The child unites diverse objects in groups under a common 'family name', this process passes through various stages. The second line of development is the formation of 'potential concepts', based on singling out certain common attributes. In both, the use of the word is an integral part of the developing process, and the word maintains its guiding function in the formation of genuine concepts, to which these processes lead. [1]

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which exists prior to the formation of a network of relationships and which is based largely on visual forms. It is not part of a system and the child can not control it.

[1] L.S. Vygotsky, Thought and Language, p. 81.

It is worth mentioning , however, that the use of 'word' must refer to the unit of verbal thought. Vygotsky's category that of complexes is the generalization of an object by the child based on visual features associated to a family or group of objects. The second stage that of 'potential concepts' or pre-concepts is based on single traits abstracted from the object but minus the connection of a logical relationship.[1]

[1]Berg, E.E., Vygotsky's Theory of the Social and Historical Origins of Consciousness,(Wisconsin: University of Wisconsin Press 1970) p.402.

EGOCENTRIC SPEECH

The development of the speech operations is a logical follow-up to word meaning. The majority of Vygotsky's ideas on the maturation of speech can be found in Thought and Language. It was there that Vygotsky voiced his feelings regarding the views put forth by Jean Piaget in his early works. Following the course of speech patterns, Vygotsky has taken egocentric speech in children as a a basic point in his discussion and debate. The development of speech in children runs a different line from that of the thought processes, although as Vygotsky mentions, they do interact and influence each other. So before enlarging on his theories of further development of thought from the generalization of an object, that of a verbal thought into abstraction, it is fitting to discuss speech.

Vygotsky quite succinctly portrays his notion of speech functions and development in his Chapter 2 on "Piaget's Theories of Child Language and Thought". Egocentric speech is that stage in a child's growth which in fact bridges the transfer from vocal to inner speech. Because of this transitional aspect, exhibiting the social nature innate in a child, and hinting at potential self-control, Vygotsky feels that egocentric speech lends itself well to research.

At the time when a child possesses egocentric speech, he also displays another type, that which is referred to as communicative. Vygotsky differentiates these two types according to the function. Communicative speech is just that, speech used in discussion between two or more people. Egocentric on the other hand, is meant for the inner, personal domain of thought or self-direction.

> Egocentric speech emerges when the child transfers social, collaborative forms of behavior to the sphere of inner-personal psychic functions... Something similar (to logical reflection), we believe when the child starts conversing with himself as he had been doing with others, when circumstances force him to stop and think, he is likely to think aloud. Egocentric speech, splintered off from general social speech, in time leads to inner speech, which serves both autistic and logical thinking.[1]

Egocentric Speech is that which the child of about three or four years of age uses for himself alone, not for the purpose of relating anything to anyone other than himself. He is thinking out loud, planning his course of behavior.It is actually a running commentary on his actions and reactions. Whether or not there is anyone to listen has absolutely no bearing on the function and expression of this type of speech. It illustrates the steps in planning or carrying out his moves. In Vygotsky's research, this has great significance because it is a means to the goal of problem solving which he considers a very

[1]Vygotsky, Thought and Language, p.19.

human aspect of mental development. Egocentric speech is shown as an elementary tool for man's approach to problem solving.

In contrast to L.S. Vygotsky's ideas on speech development there are those advanced by behaviorists and by Jean Piaget. Vygotsky's progression originates with the social and is internalized and individualized as the person's thought and speech operations mature.

> Thus our schema of development - first social, then egocentric then inner speech - contrasts both with the traditional behaviorist schema - vocal speech, whisper, inner speech - and with Piaget's sequence - from nonverbal, autistic thought through egocentric thought and speech to socialized speech and logical thinking.[1]

Its interesting to note in Piaget's retort "Comments on Vygotsky's Critical Remarks" written some twenty-five years after Vygotsky's death, that J. Piaget admits agreement with some of the criticisms. He asserts the division of function into egocentric and communicative speech. Piaget also lauds Vygotsky on his choice of egocentric speech as the "point of departure for the development of inner speech, which is found at a later stage of development, and that this interiorized language can serve both autistic ends and logical thinking."[2]

If according to Vygotsky, a child were unable to pass through the stage of egocentric speech, if perhaps he were unable to

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[1]Vygotsky, Thought and Language p.19

[2]Piaget, "Comments on Vygotsky's Critical Remarks",(Cambridge,Mass.: M.I.T. Press,1962), p.7.

vocalize, reflecting a physical defect, then any advance in the development of higher mental faculties would be impeded. At this time, Vygotsky does not acknowledge the possible substitution or alternation in the developmental process for such a child as a deaf or mute one. The resultant step that of inner speech relies heavily upon the successful completion and evolution of egocentric speech.

Inner speech in Vygotsky's research is not the silent reiteration of words or passages. There is a marked difference between inner speech and speech minus sound. The grammar of inner speech is abbreviated, - the necessity of complete sentences is absent. A form common to inner speech is that of predication. The speaker is aware of the precise sense or connotation of each word and he need not elaborate to be more concise. His units of meaning, with their nuances already fully understood, can be combined since they influence the subsequent word meanings; hence, there is a form of agglutination.[1] The basic unit of inner speech is a thought not words per se. Perhaps that is why egocentric speech, which shares some of the structural features of inner speech, at times is incoherent to a person who happens to be listening. The word order may be disjointed and unorganized and the words unclear in their sense.

> Inner speech is not the interior aspect of external speech - it is a function in itself. It still remains speech, ie., thought connected with words. But while in external speech thought is embodied in words, in inner speech words die as they bring

[1] Vygotsky, Thought and Language, p.148.

> forth thought. Inner speech is to a large extent thinking in pure meanings. It is a dynamic, shifting, unstable, thing fluttering between word and thought, the two more or less stable, more or less firmly delineated components of verbal thought. Its true nature and place can be understood only after examining the next plane or verbal thought, the one still more inward than inner speech (that of thought, itself).[1]

In an article on "Internal Speech and Thought" by A.N. Sokolov, there is an excellent commentary on the conditions of inner speech as viewed by Vygotsky. Sokolov agrees with the theory formulated by Vygotsky. He believed that the first sign of inner speech was in fact devoid of any words as we mean them in the grammatical sense; there are rather only reminders of the articulation of key words. This would be the first and very reduced form of internal speech.

> Numerous reminders of such speech reductions are cited by Vygotsky (1934); he connected them with the semantic predicativity of internal speech, with the predominance of predicates in it and lack of subjects, and found in it many features common with those of the 'egocentric speech' of children described by Piaget, when children speak with themselves during play or other activity. According to the observations of Vygotsky, in such situations children usually speak about the activity in which they are engaged at the given moment, about the

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1 L.S. Vygotsky, Thought and Language, p. 149.

> objects which are before their eyes and gradually reduce their speech to one predicate. The same is, according to Vygotsky, observed in internal speech, namely, an extreme simplification of the syntax and expression of thoughts in a condensed form which inevitably leads to a predominance in internal speech of the context meaning of words over their literal.[1]

The formation of 'semantic complexes' in internal speech provides us with a bridge to thought development, the acquisition of concepts. The first words of a child do not conceptualize the essential features of an object. They are semantic complexes that encompass things from the child's own experience. The child himself names objects on the basis of features he has picked out from his past awareness, while he ignores others. Thus, 'meaning' which is represented by the complex experience of certain similarities of the perceived objects is actually a semantic unit of the earliest child speech.[2] This is the ground work laid by Vygotsky in his study of thought. In his theory, concept thinking is the culmination of the development of a child's thought process, as fluency is in speech.

He states that if in fact we were to place a limit on the meaning of a word, or claim that it attains a specific structure, then the generalizations which come from that structure, the resultant complexes and concepts built on it, would also have a specific operation

1 A.N.Sokolov , "Internal Speech and Thought", International Journal of Psychology, Vol.6, No. 1, (1971) p.86.

2 N.Kh.Schvachkin "The Development of Phonemic Speech Perception in Early Childhood", Studies of Child Development, (New York: Holt, Rinehart and Winston, Inc., 1973) p.93.

within a very limited scope. [1] Vygotsky felt that by attributing dynamism to the basic components of language development, verbal thought and meaningful speech, one can justify or at least not undermine the evolutionary concept of man's development.

[1] L.S. Vygotsky, "Razvitie zhiteiskikh i nauchnykh poniatii v shkol'nom vozraste", Umstvennoe razvitie detei v protsesse obucheniia, p. 98.

CHAPTER IV

CONCEPT FORMATION

Its obvious from L.S. Vygotsky's articles that he held thinking to be the key to successful research into man's essence. Thinking is that process by which man becomes an individual; that process through which man's active nature serves his own and future generations. An understanding of thought, its content, structure and function was the cornerstone of cognition, of paramount importance to Vygotsky. So the time spent by him probing into the origins of the thought process and closely mapping its progression in the growth of children seems both understandable and worthwhile. From the basic kernel of word meaning, he elaborates the theme as the child's mastery of language is improved, along with it his increased mental faculties. Vygotsky enumerates the stages of development from the name stage through complexes into abstraction, concepts and logic, in his work, Thought and Language. He takes every opportunity to reiterate the interrelationship of man's higher mental functions while he charts the general development of cognition. For example, he cites that the meaning of a word had at first to do with the child's own perception of reality; this perception is influenced by the degree of development of some lower and higher functions.

The study of thinking is not complete unless one examines both aspects - to research the changes in the word meaning and to

study those functions realized in the spoken thought.[1] Here once again he disagrees with Jean Piaget, who disregards the function of thought as immaterial to his research.[2]

To illustrate this point, the necessity of dual aspects in the study of thought development, L.S. Vygotsky has chosen so-called life and scientific concepts as his point of reference; the former which refer to everyday, life or spontaneous concepts, reflect a natural side. According to his theory, they are acquired through experience without formal instruction; they are relationships which are perceived by the child in his daily routine. The child has formed a connection based on traits abstracted from the objects or his experiences. He does not, however, interrelate them; each spontaneous concept remains unbound, as an island. The child as well is unable to actively create them.

> (Vygotsky's)spontaneous concepts arise in the child's meeting with real things and with their concrete properties, among which he .. finds certain similar features and with the help of a word he relates them to a specific class of objects, (he forms a 'concept' - more precisely a general representation). This is the course from the concrete to abstract. Having such a concept, the child realized that which is represented in his object, but he doesn't realize the very concept itself, his own act of thought, with the help of

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[1] Vygotsky, "Razvitie zhiteiskikh nauchnykh poniatii v shkol'nom vozraste", p.99

[2] Ibid, p.99.

which he has represented the given object.[1]

In opposition to the spontaneous, the child reaches the scientific concepts with a definite logical relationship among them. From the start he is more aware of the concept itself than of the object. Here we have a progression which is reversed, from the abstract to the concrete; from the concept to the object. These points are of vital importance when the study of the scientific concept arises. These qualities are where the two types of learning differ so radically.

A view stressed by L.S. Vygotsky is that concept development is well on its way sometime before the child enters school. The start of school, however, marks a radical change in his approach to learning. It signifies a new stage in his intellectual development and can either enhance or retard the progress depending on the teacher. For this very reason, he took such a vital and energetic stand on educational research, which he unfortunately put into the domain of ill-fated pedology.

L.S. Vygotsky opposed the theory that both types of concepts are acquired in the same manner, one being merely the extension of the other; however, he does admit to a former agreement with that assumption, which he had the fortune to outgrow. Since the scientific concept is developed under totally different conditions it stands to reason that the courses will be just as sharply divided. One rather

[1] V.V.Davydov, "Problema obobshcheniia v trudakh L.S. Vygotskogo" Voprosy psikhologii, Vo. 12, No. 6 (Moscow, 1966) p.49.

obvious point is the active approach to learning in school. A child is made aware of the facts and relationships. When forming a concept, he is very much aware of its interrelationships with other previous ideas. The scientific concepts arise on the basis of knowledge amidst his inventory of spontaneous concepts. But that everyday data already acquired by the child cannot be expressed on command. It was learned passively and is therefore difficult for him to verbalize actively; while even the initial scientific concepts can be re-expressed relatively soon afterwards. It is on this situation that Vygotsky elaborates and theorizes that, where the scientific concept is strongest the spontaneous one is weakest and vice versa.[1]

> The child knows quite well that there is such a thing as a 'brother', his knowledge is saturated by a lot of experience, but when its necessary for him to resolve the abstract problem 'a brother's brother' or 'a sister's brother' enumerating this he is confused; he has difficulty when the understanding of 'brother' must be put into pure meaning. When the child masters the scientific concept, for example that of 'revolution' the weakness is not because the child is weak in the area of such concepts as revolution (it is often where one must answer about reasons behind the revolution that a child does well), but rather where the concept 'brother' seems strong ie. where the child's experience backs up the understanding, which guarantees that the word 'brother' is not the verbal signifier of any

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[1] L.S. Vygotsky,"Razvitie zhiteiskikh i nauchnykh poniatii v shkol'nom vozraste", Umstvennoe razvitie detei v protsesse obucheniia, p.103.

> phenomenon, there is where the scientific concept of the child is weak.[1]

When a child must rely upon his own experience, the everyday concept is strongest, but when he must give a reason or a logical relationship, the spontaneous understanding is weak and the scientific one is stronger.

Once having so firmly established his feelings on the basic difference in the nature of the two types of concepts, L.S. Vygotsky goes on to discuss their dependence on one another. The information covered in the questions is, one could say, extracurricular, experienced outside the classroom. The child undoubtably has run across the situations but where he fails is, not from comprehension of the content or even its logic, but rather according to Vygotsky, it is the active nature of the question. The child may fail because he can not actively verbalize a relationship which he had been involved with passively. He knows the separate facts but doesn't see the connection. Here once more Vygotsky stresses most determinedly the effect of active versus passive learning. The child may well be able to verbalize the logical relationship between material covered by subjects taught in school eg. social sciences, arithmetic, while being unable to relate everyday information. The source of difficulty thus, goes back to his original acquaintance with the subject matter, be it actively aware or through habit.

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[1] L.S. Vygotsky, "Razvitie zhiteiskikh inauchnykh poniatii v shkol'nom vozraste", pp. 102-103.

Proper completion of the test situation would depend on the psychological process summoned up and the child's ability in the respective operation. This point is further illustrated by the reference to phonetics. A child may say 'Moskva', but when asked to repeat the sound 'sk' in isolation and voluntarily, he is unable. Likewise, this can be elaborated to language development. Fluency of speech comes passively; it is only when the child attempts to study his language, in school, that he becomes able to deliberately reproduce grammatical situation e.g. declensions, conjugations...[1] This is because an active knowledge is required. Given the study of grammar, the child becomes aware of the speech operations he is doing. Just as he has stressed the fundamental division between thought and speech, then going on to show how the courses of development of the two processes intersect and interact, so he charts the progress of concept formation with its two separate but related components.

> They are internally connected with each other because the development of the child's life concept must reach a certain level in order that the child in general is able to master a scientific concept and in order for this scientific concept to be possible at all.[2]

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[1] Vygotsky, L.S. "Razvitie zhiteiskikh i nauchnykh poniatii v shkol'nom vozraste", p.101.

[2] Ibid., p.103.

The spontaneous concept must prepare the ground work, make ready the intellectual environment, for the absorption of the scientific concepts. For several years, a child simply does not have the mental capacity to learn the relationships which are basic to scientific understandings. Initially, the everyday concept forms the mental foundation, but as we have mentioned the two types following separate lines do interact. There is a point where the scientific concept development must attain a certain depth of maturity before some spontaneous ones can be realized. Here Vygotsky cites the example of 'brother' once again, and the test administered by Piaget with the word 'because'.[1]

> The child has brothers and hears that his friends are themselves brothers, but he never thought of them as 'brother', this was never the subject of his cognitive thoughts, but in school all concepts of the social sciences, were built as he worked precisely in the field of consciousness.[2]

Those tests illicited a response based on logical relationship in everyday occurrences. For example: 'the cyclist fell from his bike and broke his foot because...', 'the child was sick and stayed home from school. The child missed school because...'. A reaction to Jean Piaget's tests besides the above mentioned comments on the source material of the various concepts, was L.S. Vygotsky's criticism of

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[1] L.S. Vygotsky, "Razvitie zhiteiskikh i nauchnykh poniatii v shkol'nom vozraste", p. 106.

[2] Ibid., p. 114.

the test evaluation. He felt that J. Piaget ignored what the experiment actually illustrated; not how much a child knows but rather what the child is capable of learning. A favorite topic of Vygotsky's is what he calls the 'zone of proximal development' (blizhaishego razvitiia), the child's range of potential awareness. It is up to society, parents and teachers to challenge the child's 'zone of proximal development'. This is one major reason for the importance of formal instruction as well as educational research in the studies of Vygotsky. The teacher's learning program must be one step ahead of the child, encouraging him not to delay his progress. What the tests which Piaget conducted did show besides the basic difference of active and passive awareness, was what a child could be taught with the help of prompting or instruction. A child could answer correctly by imitating what someone else had done or said. What he could accomplish with the guidance of an adult at one point merely illustrated or predicted what he was capable of performing on his own at a later date.

For a detailed description of L.S. Vygotsky's theory on the position of education in relation to human development, one can refer to his article "Problema obucheniia i umstvennogo razvitiia v shkol'nom vozraste". This article was written in 1934 toward the end of his life. In it he presents the contrasting views that either the learning process and development are totally independent or in fact that they are one and the same. The former view

holds that education always follows in the tracks of mental development. In order to defend his own very different position, that instruction must precede development, he claims that you must first understand the relationship which exists in general between education and development; and secondly, understand those specific peculiarities of their relationship in the school age child. In the process of shedding light on each he differentiates two levels of progress: the level of actual development and the zone of proximal development. The former is an analysis of what the child has actually already completed, the results of specific fulfilled cycles of development. With the help of tests, he feels that you can almost certainly determine this level of actual development of the child up to the present day. This is an evaluation of what the child can perform independently of assistance, guidance or prompting.

However, the latter, the zone of proximal development, according to Vygotsky, is an analysis and prediction of what the child will be capable of achieving given the instruction of school or adults. 'What the child can do today with the help of adults, he can do tomorrow on his own'.[1]

Vygotsky values only that instruction which actually goes ahead of the level of development already achieved by the student. According to his article, it is the child's education which creates his 'zone of proximal development'. It acts as the catalyst in

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[1] Vygotsky, "Problema obucheniia i umstvennogo razvitiia v shkol'nom vozraste" Izbrannye psikhologicheskie issledovaniia, p.44.

realizing a whole series of internal processes which seem at the present time possible for the child only in groups or under supervision.[1]

During the exposure to formal instruction, a child's awareness of mental operations and eventual control is further advanced by his introduction to the social sciences, grammar lessons, foreign language and mathematics. His initial acquaintance with scientific concepts in school presents him with a web of interrelated notions or phenomena. His world of thought begins here to take on an organized systematic appearance. Just as he learns to relate experiences and ideas, so can he apply conscious knowledge in one sphere in order to activate an awareness of what had up to that point been perhaps a habit, something he had been able to do but not on demand.

For instance, the study of grammar would enable him to apply the syntactical structures of speech he has been using, actively. It would not necessarily teach new forms but rather shed a new awareness on the habitual ones.[2]

Likewise, Vygotsky discusses the subject of a foreign language. He compares a foreign language to a scientific concept and the reverse, a native tongue to everyday concept. This comparison

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[1] L.S. Vygotsky, "Problema obucheniia i umstvennogo razvitiia v shkol'nom vozraste", p.448

[2] L.S. Vygotsky, "Razvitie zhiteiskikh i nauchnykh poniatii v shkol'nom vozraste", p. 106, also Thought and Language, (1962) p.101.

is made on the basis of functional similarity and means of acquaintance with the material. A native language is met with and acquired in the course of daily exchange with adults from an early age. It is internalized without conscious effort and is used by force of habit. A foreign language, on the other hand, provided it is learned at a later age is mastered arduously perhaps in the active process of instruction. The child is made aware of speech pattern and vocabulary before he can reproduce fluent or meaningful speech. The transformation to the unconscious level of internalized thought is the most difficult for a foreign language student. This point also serves to further substantiate L.S. Vygotsky's claim that where the scientific concept is weakest, the spontaneous one is strongest

However, once again he crossreferences his topics by saying that in order to more fully master your own language, a person must know more than his native language. Each aspect of learning reinforces the other, further contributing to the overall intellectual development of the child.

CHAPTER V

REVIEWS

The appearance of L.S. Vygotsky's monograph Thought and Language in 1962, translated by Eugenia Hanfmann and Gertrude Vadar, resulted in a score of reviews in western psychology circles. The translators and editors were undoubtably well prepared for the task. Eugenia Hanfmann had actually reproduced certain Vygotsky experiments in collaboration with J. Kasanin in the study of concept formation. She was in fact approached by the protege of the scientist, A.R. Luria, in 1957, to join forces in this monumental undertaking.[1] As is mentioned in the translator's preface, a decision to clarify, abridge and unify the original essays was agreed upon even before the project was underway.[2] This action is understandable and quite justified in the eyes of any reader of Vygotsky's original works, Thought and Language being no exception. A certain essence of continuity has to be left to the editors' discretion. The source of his monograph Thought and Language is not one complete production but rather several somewhat unrelated essays written at various times. Vygotsky himself had attempted to unify the threads with their eventual publication in mind but was unable to complete it before his death. The original Russian publication did appear posthumously. The resultant English

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[1] Hanfmann and Vakar, "Translators' Preface", Thought and Language (Cambridge, Mass.: MIT Press, 1962), p. xi.

[2] Ibid., p. xii.

translation is excellent, although perhaps over simplified. Depending on the reader's specific area of concentration, he may dispute the omissions, abridgements, or paraphrases of the translators; however, for a general introduction to L.S. Vygotsky and his cognitive theories it is more than adequate. One point I would like to discuss is, however, the title, Myshlenie i rech', which is perhaps more accurately rendered as thought and speech. The idea of language was to Vygotsky more inclusive than speech. The development of language is mapped by the evolution of both thought and speech operations in man; it is that cognitive tool which has been brought down through the ages and which bears the mark of each culture. The term speech is interpreted by Vygotsky more narrowly, ontogenetically.

Because Thought and Language was the only work to appear in translation until, Psychology of Art in 1971 (with the exception of the two articles, "Play and its role in the mental development of the child" (1967) and "Learning and mental development at school age" (1963)), it was the center of the critics' attention. With this in mind, it is easier to comment on the opinions.

Essays such as Susan Ervin's "Incisive Ideas from the Soviet Union" summarize the pervasive threads in Vygotsky's work.[1] She has abridged Vygotsky's already condensed theories. Ms. Ervin has singled out his conceptual description of language and his evolutionary theory of language as a behavioral mediating device. She does however, raise the eternal question of meaning, which is in this case further

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[1]Susan M. Ervin, Contemporary Psychology, (1962), Vol. 7, p.406.

obscured with a translation. The problem is intensified with Vygotsky's use of meaning and sense, znachenie y smysl. "Sense is the sum of all the psychological events aroused by a word; meaning is its stable core.".[1] But according to L.S. Vygotsky, word meanings do evolve. The sense perhaps may differ within the individual, but the meaning changes as well, characterizing particular stages of development. Meaning can more easily be defined but is not necessarily stable.

W. Line's dissection of Thought and Language is less like a summation; he credits Vygotsky as being a link between the German scholars N. Ach and the Wuertzburg school and present day A.R. Luria.[2] This is a logical connection, since Vygotsky's theoretical bases were more closely linked with the German school of thought as opposed to the Locke, Thorndike tradition, and in view of the fact that A.R. Luria was in fact his student. He was however reluctant in 1962 to show recognition of Vygotsky's influence of today's psychology in the U.S.S.R. Perhaps, in the ensuing decade the trends in the Soviet Union have crystalized as the renewed appreciation of Vygotsky's theory has flourished.

Some reviewers however, have been more critical of L.S. Vygotsky. Ms. Wright reiterates his ideas again and evaluates his as an original presentation of intellectual development which should prompt future research. It's contribution is largely of theoretical interest to scientists and educators alike.[3] Although Mr. R.B. MacLeod

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[1]Susan M. Ervin, Contemporary Psychology, (1962) Vol.7, pp. 406-407.

[2]W. Line, American Journal of Psychiatry, (1962-63), Vol.119, p.1111.

[3]Mary J. Wright, Canadian psychiatric Association Journal, Vol. 10

feels that Vygotsky was ignorant of past and contemporary psychological research, and presented nothing new to us, he commends the work as provocative and suggests that it be read as an example of post Pavlovian psychology in the Soviet Union.[1]

However, both Ms.Wright and Mr. MacLeod have capitalized on a valid point of criticism. They found in Vygotsky's book that quotations and references are severely lacking. In order to have a fuller comprehension of his logic, it is important to be familiar with the same works that he had read. This is made a very difficult task in the absence of sufficient reference data. This problem of footnotes and references is not unique to Vygotsky's monograph, Thought and Language. It is prevalent throughout his articles and reports. As a matter of fact, this condition was indicative of the times in the Soviet Union, when it was indeed assumed that the readers were well read in related material.

Another important technical shortcoming noted by some critics is the author's inadequate reporting of his experiments. His methods are often dubious and what is worse his results are not always fully given or explained. What seems to have happened is that his original plan for factual, experimentally based treatise has indeed remained theoretical to a great extent.

J. Fodor in his essay, "Some Reflections on L.S. Vygotsky's Thought and Language" goes one step further by criticizing Vygotsky for

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(1965), pp. 68-69.

[1]R.B. MacLeod, American Journal of Psychology, Vol. 76, (1963), p.535.

> Ostensibly presenting experiment-based decisions when in fact he bases his experiments on untenable assumptions, thus defeating the purpose - an objective approach without philosophical assumptions.[1]

Fodor feels that Vygotsky does not deal with the problem of thought and language as the title may suggest, but rather with cognitive development.[2] Fodor would rather that Vygotsky describe the language input code which is to be learned by the child, as well as discussing to what extent that language is innate or is unstable and apt to change. What must a language be in order to be learned? Fodor emphasized the need for more linguistic description. This, however, was not the intention or inclination of Vygotsky. He was more prone to investigate and theorize about the intellectual development of the thought and speech operations. Vygotsky does indeed trace man's cognitive development but in particular along the lines of the growth of the two separate but dependent processes, thinking and speech. He refers to the existence, interrelation and importance of the other intellectual functions, all of which lead to the culmination of man's development of his potential cognitive powers. Thought and speech lend themselves to research more readily than some other aspects of intellectual development. They are as well of rudimentary interest to Vygotsky. With their progress thus charted, he can advance to further studies into the role of education during this development and deviations from the normal course.

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[1] J. Fodor, "Some Reflections on L.S. Vygotsky's Thought and Language" Cognition, (1971) p.84.

[2] Ibid., p.86

Jerome Bruner has presented his praise of Vygotsky's work twice; once in the introduction to Thought and Language (1962) and the second time in the preface to the special commemorative edition of Soviet Psychology (Spring, 1967). He cites as the reason for L.S. Vygotsky's relatively mediocre status among psychologists (specifically in western psychology criticism), the late arrival of his material. By the time his theories appeared even in the original, the psychology of the day was already more formalistic.[1] Psychology had advanced far beyond "the intuitive phenomenological approach to a systematic effort in seeking the underlying structure in thought and language, and the connection between them".[2] Psychology has also specialized, into camps such as cognitive, developmental psychology and psycholinguistics.

However, Bruner does feel that "On their own, all present day cognitive theorists accept the general thesis of L.S. Vygotsky concerning the active, strategic, and programmatic nature of thought".[3] In addition, the developmental psychologists Piaget, have absorbed many of Vygotsky's ideas."[4] Bruner has in mind at this time, Vygotsky's article on play and its role in the child's development. Vygotsky asserted that children play according to the set of rules taken from society. Those rules have grown out of the initial stage

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[1] Jerome Bruner, "Preface", Soviet Psychology, (Spring, 1967) Vol. V., No. 3., p.4

[2] Ibid., p. 4

[3] Ibid., p.5

[4] Ibid., p.5

into the cognitive realm. When the child pretends a stick is a horse, for example, he has shown a vital step forward toward abstraction, as he has taken the first step, separating the visual, the object from the meaning.

Bruner has been bold enough to acknowledge Vygotsky's impact on western psychology while other above mentioned reviewers have only alluded to it.

The recognition and influence of Lev Semenovich Vygotsky's research is far more prevalent within the Soviet Union today. For many years however, his work was given little attention either in the West or in the U.S.S.R.

As he became more noticed, since the twentieth party congress in 1956, the Soviet reviewers have gradually underplayed his association with pedology. This shift has resulted in the eventual omission of any reference to the censorship of 1936. Kolbanovskii's article in 1956 revives the disapproval not so much of his association with the child science, but most emphatically for not having spoken out publicly against them.[1] Petrovskii in his survey on Soviet psychology could not skirt the issue either, but he took a more factual reportorial course.[2]

While the more current Soviet reviews of Lev S. Vygotsky are vociferous in their praise, they nonetheless insert issues of disagreement. A very frequent point of divergence is Vygotsky's insufficient experimental, materialistic approach to research. While

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[1] V.N. Kolbanovskii, "O psikhologicheskikh vzgliadakh L.S. Vygotskogo" p.112

[2] A.V. Petrovskii. Istoriia sovetskoi psikhologiia, p. 302.

being lauded for opening their eyes to the socio-historical origins of mans' consciousness, his articles are found to be too theoretical. His approach to the mysteries of human cognition seem to have been along the lines of psychological, intellectual development, less satisfying than a more materialistic study. His coworkers A.N. Leontiev and A.R. Luria, very prominent since the 1930's in psychophysiological research, developed some of his ideas but with the emphasis on experimental data, full of the Pavlovian based classical conditioning.

An offshoot of Vygotsky's intellectual approach is his pronounced divisionof the lower, natural processes from man's higher mental functions. The specifically social determinants of the latter, he claimed did not extend to the former. Soviet scientists since then have shown a profound interest in the transfer from the lower to the higher functions, the interrelatedness of the first and second signal systems.[1] To them this was a discredit to Vygotsky.

> This division of mental functions, into natural and higher was an essential contradiction in the whole conception of the historical development of mind. Such a division contradicted the facts which Vygotsky himself had established.[2]

Zaporozhets feels that, Vygotsky's shortcomings were rectified as Soviet scientists further explored man's mental activity; however while they are of initial significance in Soviet research they could

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[1] M. Creelman, Experimental Investigations of Meaning, (New York: Springer Publishing Company, 1966), p.201

[2] Elkonin, "The problem of learning and mental development in L.S. Vygotsky's work", Soviet Psychology, Vol. V., No. 3, (Spring, 1967) p.35

not avoid being changed considerably.[1] Despite Zaporozhets' comment, there is a current trend back to Vygotskian based theories of general psychological cognitive functions.[2] The emphasis is reverting to Vygotsky's intellectual approach away from the strictly Pavlovian conditioning. Vygotsky's theories are prevalent, although not always footnoted in many general and child psychology textbooks. (Liublinskaia, 1971, Petrovskii, 1970). Vygotsky's name has made a remarkable comeback, perhaps now forty years since his work ended, more reknowned than it was when his research was active.

[1] Zaporozhets, "L.S. Vygotsky's role in the study of problems of perception", Soviet Psychology, Vol.V, No. 3, (Spring,1967) p.27

[2] M. Creelman, Experimental Investigations of Meaning, p. 197.

CHAPTER IV

REFLECTIONS

The current trends in Soviet psychology are reminiscent of the 1930's battle for consciousness.[1] Psychology at that time was seeking to break from the yoke of idealistic philosophy and physiology. Since the late 1950's there has been a resurgence in the struggle for prominence between classic Pavlovian and Vygotsky's approach to psychology. Today the findings and interpretations of a man of those past times are being reread. There are indications once more of a shift in the direction of Vygotsky's approach to psychology.

Vygotsky had been a man who definitely bore the mark of his era. Perhaps because of his intimate contact with the instruction of school children in Gomel' or because of his association with daily administrative problems, he was intrigued by human potential, yet aware of the practical obstacles to application. His ultimate aspiration was the clue to man's nature. Having been exposed to philosophy, history, literature, psychology and near the end to formal medical training, his search for that clue was far from direct.

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[1] The "battle for consciousness" is a term used to denote the period of 1925-1930 when scientists disputed the basic subject of psychological studies. Chelpanov and Freud considered it man's subconscious, while reflexologists and behaviorists believed psychology should probe the behaviour of living things. (see p. 2).

Vygotsky chose to investigate the development of language. This was essential to unraveling man's cognition and potential creativity. His results are worthy of notice and provide fertile ground for ongoing research. He launched an innovative and active approach to psychology. To Vygotsky it was the cognitive element which was of primary significance in an active process. In each statement, there is usually a contradiction to theories of reflexology, gestalt or behaviorism. The thrust behind his assertions came out of disagreement. It is the active assimilation by man of his social experiences which founded Vygotsky's theories, not the passive reaction to external stimuli. His experience in applied, practical psychology, having been involved in the actual classroom teaching of normal and physically handicapped children, was good experience for his theoretical research.

The most illustrative feature of man's superiority over the push-pull situation is his creation and use of language. It seems only logical that a scientist probing cognition would turn to a theory of language development as Vygotsky did. Vygotsky quite correctly related man to his society, culture and history, taking him out of the sterile isolated test tube of the behaviorists. His preference was for the second signal system of Pavlov and his research concerns itself with the construction of it. Vygotsky considered it quite separate from the first, which was a system of conditional reflexes, the individual's physiological connections with

the environment. The alluring characteristics of language are its history (evolution) and social function. They can be parelleled with man's own social and historical development.

Vygotsky's logic was to look into the development of language, thereby hoping to uncover the key to man's cognitive powers. He further subdivided language to facilitate research into the components thought and speech. His analysis however, was not of the parts but of their interrelation. According to L.S. Vygotsky, anyone who sought the nature of water by analyzing the properties of hydrogen and oxygen would not discover the true characteristics of H_2O.

His analysis was on two planes: the conscious and unconscious. This became more evident when he reached concept formation, an advanced stage of language development. The initial acquisition of thought and speech processes in the immature, the child, was on the unconscious level; not until he was ready for school instruction, a radically different appraoch to knowledge acquisition, did the child's consciousness come to fore.

The progress of language development was followed from the social to the individual. When a child could use a language he could then effectively master his own behavior. The activity originally a two person operation ie. the control of the child's behavior by an adult who represented the social environment, was transformed and behavior became an internalized act of self control.

These are two very important points made by Vygotsky.

The first in contrast to Jean Piaget's model of development, is the notion that a child matures into an individual from a reflection of the social environment; and the second, that language is in fact a regulator of behavior. Both these theories have been developed in subsequent scientific investigations.

As was mentioned earlier in the discussion of Vygotsky's basic premises, his study of cognition is based on the construction of a highly integrated system of mental functions. These functions in turn rely heavily upon the successful development of the underlying lower processes. A failure reflected in the development of one aspect of cognitive operations could indeed point to a physical problem. This seems an obvious fact but one which must be consciously considered in the study of cognition.

While dealing with possible and observed deficiencies, Vygotsky has experimented with the handicapped to substantiate the norm by contrast. But what he does not do is to delve into the possible alternate courses of development to enable a handicapped individual to reachfuller cognitive development. Like many critics, however, one can find insufficiencies where the reader's interests digress from the author's ultimate goal. For Vygotsky it was still a matter of deciphering the essence of cognition. Criticism is more apt to reflect the critic than the subject. Perhaps had he lived to old age, he might have sought a cure for retardation, or perhaps he would have satisfied J. Fodor and redressed his language development

theory on a more linguisticly descriptive level. One can find in Vygotsky's studies a fairly clear and concise description of the ontogenetic evolution of language. The first stage is word meaning. This stage is actually a progression itself, maturing and broadening as the child's other mental operations grow, such as perception, attention, and memory. For Vygotsky, it is difficult to isolate any segment of cognitive development; the network of interrelations is constantly present. It could be a point of confusion, if one tries to illustrate one facet of growth by others whose conditions are in turn affected by it. Vygotsky avoids circular reasoning and does produce a systematic analysis.

Vygotsky is not concerned very much with a definition per se of word meaning, but rather with a relative positioning in the evolution of thought and speech. Word meanings characterize the intellectual growth of the individual in regard to his society. The acquisition of word meanings is a product of interaction with society, reinforced by experience, and retained according to the ability determined by mental preparedness. Thus, Vygotsky's approach to word meaning is a psychological reference rather than a specific definition.

Recent psychophysiologists in the Soviet Union have found words to be connected with both the external and internal stimuli which reach the cerebral cortex. They signal stimuli and eventually replace them. Words are capable of evoking all the actions

and reactions which the original stimuli produce. Luria, Vygotsky's protege, pursued his investigations of word meanings on a more objective experimental level. He combined word association and the classic Pavlovian conditioning to study the development of language as the second signal system in relation to the first.[1] However, present day soviet psychologists such as A.A. Leontiev, A.N. Leontiev's son are prone to more theoretical presentations of language and language learning, reminiscent of Vygotsky.[2]

Vygotsky's view of word meaning was that of a dynamic condition, categorizing and reflecting the individual's development, but evolving along with the cognitive operations.

A vital time in human development has been shown in his articles as the transitional, so-called preschool age, falling between ages 3 to 7 years. Here, if man's potential is to be capitalized upon, the optimum in instructional guidance is necessary. This is a volatile age with great variance exhibited among children. The learning process must follow the child's own program and emotional interests to a great extent; however, the introduction of adult supervision and superimposed goals which are directly applicable to the child's own readiness and to his potential are of cardinal importance. Here, the child's intellectual development can be enhanced, tolerated or retarded.

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[1] M. Creelman, Experimental Investigations of Meaning, p.23

[2] See the article by A.A. Leontiev "Some Problems in Learning Russian as a Foreign Language" in Soviet Psychology Vol. XI, No.4 Summer 1973

Due to the public school system in the Soviet Union since the fall of the Tsars, with the prevalence of the detskii sad, Soviet pedagogics have been aware of the vulnerability of this age. However, only recently in North American countries has there been a clamor for more pre-school facilities. The impetus behind this is unfortunately not founded on a particularly acute awareness of the potential of this age group, but rather on the plight of the working mother.

Vygotsky's discovery of the uniqueness of this age was a direct result of his research on language development. It is during these years that the child, newly exposed to the function of words, undergoes the crucial stage of egocentric to inner speech, crossing the threshold to possible conceptual thinking.

A discussion of L.S. Vygotsky's theories on language development in Man exhibits a certain relevance today. The scientist's views have afforded us some insight into the characteristics of the preschooler and the associated educational considerations necessary. Not only are his articles productive in the realm of general psychology, awakening a concern for man's active nature, but they are also a positive contribution to educational studies.

Perhaps with more psychologically oriented research in both the Soviet Union and the West, along Vygotskian lines, the essense of man's creative powers can indeed become known and fostered. For the present, psychological reviews of Vygotsky are supportive, illustrating a trend directed in harmony with Vygotsky's theories. The recognition

of his work, however belated in the West, may prove a significant advance for understanding through language studies of mans' existence.

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